

A NEW JAMAICAN BLOOD-SUCKING MIDGE FROM LACEWINGS
(DIPTERA, CERATOPOGONIDAE)

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This note is prompted by the receipt of a series of biting midges found attached to the wings of *Chrysopa* near Kingston, Jamaica by Dr. Thomas H. Farr of the Institute of Jamaica. These midges, identified as a new species of *Forcipomyia*, subgenus *Pterobosca*, are the second species of this subgenus, and the first from the Western Hemisphere, known to feed on lacewing flies. Three other *Forcipomyia* species previously reported from Neuroptera, *eques* (Johannsen), *okadai* (Tokunaga), and *mcateeii* Wirth, belong to the subgenus *Neoforcipomyia* Tokunaga.

When I reviewed the species of biting midges ectoparasitic on insects (1956), all of the known species of *Pterobosca* were recorded from Odonata. Tokunaga and Murachi (1959) reported the first *Pterobosca* species parasitic on lacewings from the Palau and Caroline Islands in the Pacific. They expanded Saunders' (1956) classification of the subgenera of *Forcipomyia* to include *Pterobosca*, a decision with which I concur. Unfortunately, the name of their lacewing parasite, *Forcipomyia* (*Pterobosca*) *chrysopae*, is preoccupied in *Forcipomyia* by *chrysopae* Mayer 1934, which in turn is a synonym of the Holarctic *F. eques* (Johannsen). I therefore propose *F. (P.) chrysopipennis* **new name**, for *chrysopae* Tokunaga, not Mayer.

Tokunaga and Murachi (1959) gave a revised diagnosis of the subgenus *Pterobosca* and presented a key to the 16 known species. More recently the two following species have been described:

Forcipomyia (*Pterobosca*) *asahinai* Tokunaga, 1962, Pacific Insects 4: 188 (Ryukyu Islands; ex *Orthetrum sabina* Drury).

Forcipomyia (*Pterobosca*) *ogatai* Tokunaga, 1961, Bull. Osaka Mus. Nat. Hist. no. 13, p. 3 (New Caledonia; host unknown).

I am pleased to name the new Jamaican species in honor of its collector, Dr. Thomas H. Farr, in appreciation of his continued interest in the study of ectoparasitic midges.

***Forcipomyia* (*Pterobosca*) *farr*i**, new species
(Figs. 1-5).

Female.—Length of wing 0.75 mm.

Head brown. Eyes bare, contiguous for a considerable distance on upper portion. Antenna (fig. 2) brownish; lengths of flagellomeres in proportion of 15-10-10-10-12-14-16-20-22-23-28-28-38; antennal ratio (combined lengths of the distal 6 divided by that of the preceding 7) 1.8; proximal flagellomeres disciform, lengths gradually increasing through 9 which is as long as broad; 10-12 each about half again as long as broad; 13-14 slightly longer, 10-14 each dis-

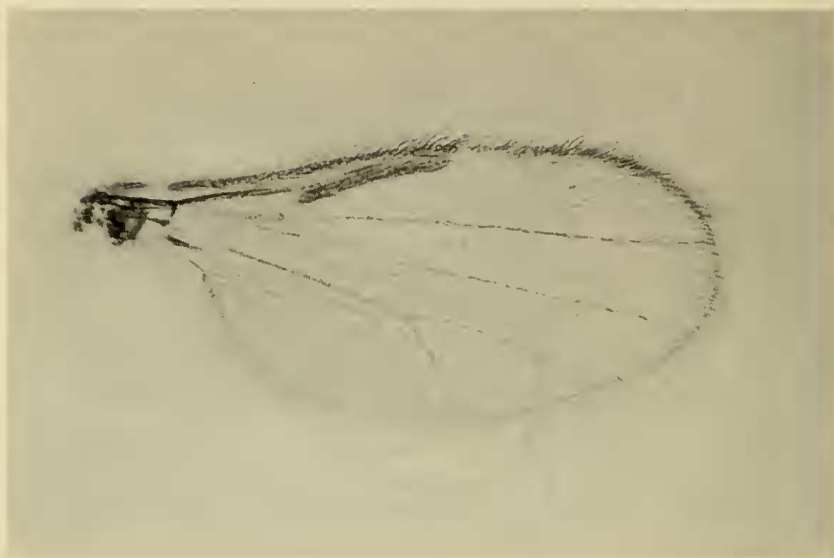


Fig. 1. *Forcipomyia* (*Pterobosca*) *farri* n. sp.; photograph of female wing.

tinctly tapering distally; 15 long and tapering to round terminal papilla. Palpal segments (fig. 3) in proportion of 8-10-23-14-15, third segment 1.2 times as long as broad, with a small, deep sensory pit opening by a smaller pore; segments 3-5 dark brown. Mandible slender distally, only about half as broad as usual in the genus; with 10, very heavily sclerotized, minute teeth.

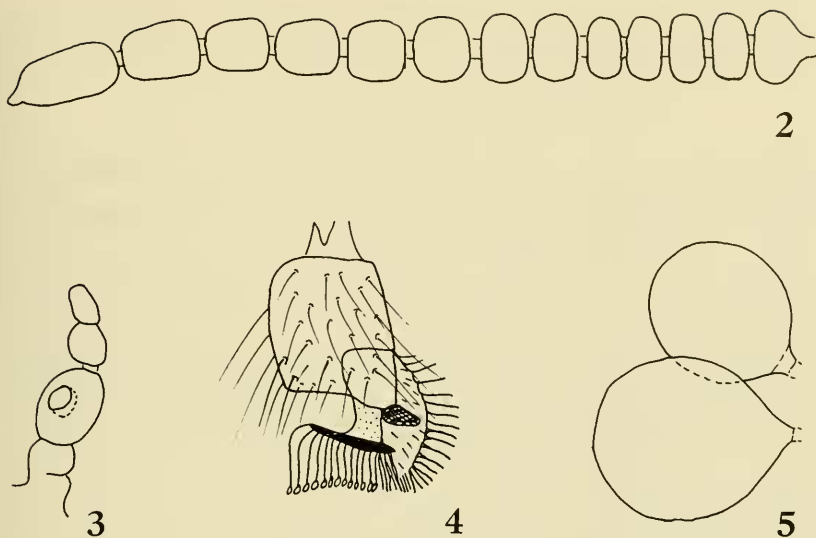
Thorax appearing dark brown in slide mounted specimens. Legs brownish, tarsi whitish; hind basitarsus 3.4 times as long as second tarsomere; fifth tarsomere (fig. 4) nearly twice as long as fourth, slightly longer than broad; claws absent; empodium with dense, long, capitate hairs distally, forming a compact distal pad. Wing (fig. 1) with costa extending to 0.58 of wing length; radial cells slitlike, apparently obliterated; vein M1 ending in wing margin considerably in front of wing tip; macrotrichia very long, but not very dense; discal portion of wing devoid of macrotrichia in lines paralleling the veins and in proximal half of cell M4. Halter deeply infuscated.

Abdomen pale brown, with very sparse hairs and dense spiculation; terga dark brown and reduced to well separated sclerites each about twice as broad as long, each more or less divided into a pair of hemisternites. Spermathecae (fig. 5) two, slightly ovoid, tapering slightly to a short sclerotized neck; unequal, very small, measuring 0.039 mm. by 0.032 mm. and 0.032 mm. by 0.025 mm.

Male.—Unknown.

Distribution.—Jamaica.

Types.—Holotype female, St. Thomas, Morant Bay, 14 mi. east of Kingston, Jamaica, 5 Jan. 1964, T. H. Farr, ex wing of *Chrysopa* (Type No. 67422, USNM). Paratypes, 3 females, same data as type except one with date 2 Feb. 1964. One paratype will be deposited in the



Figs. 2-5. *Forcipomyia* (*Pterobosca*) *farri* n. sp., female. 1. antennal flagellum; 2. maxillary palpus; 4. fifth tarsomere showing detail of empodium, lateral view; 5. spermathecae.

Museum of the Institute of Jamaica and one in the British Museum (Natural History) in London.

Discussion.—*F. farri* runs in Tokunaga and Murachi's (1959) key to *mollipes* (Macfie) from Africa, and *lairdi* (Wirth) from the Solomon Islands, both of which also lack the tarsal claws and have two spermathecae and a definite palpal pit. *F. mollipes* and *lairdi* both differ from *farri* in having the apex of the mandible much broader, spermathecae subequal, and all of flagellomeres 4 to 9 greatly compressed. *F. lairdi* differs also in having an indistinct palpal pit, and flagellomeres 10 to 14 slightly longer than broad.

Johannsen (1951) did not name a damaged *Pterobosca* specimen from a Puerto Rican dragonfly, which appears to be closely allied to *mollipes* and *farri*. Through the courtesy of Dr. L. L. Pechuman, this specimen was borrowed from the Cornell University collection and reexamined. The antennae are very similar to those of *mollipes*; the mandibles are damaged and palpi are in a poor position to observe the sensory pit; the claws are absent, but the empodium differs from that of *mollipes* and of *farri* in consisting of a pad of fringed hairs much as Macfie (1932) figured for *adhesipes* (Macfie); the spermathecae are larger (0.072 mm. by 0.056 mm.) and narrower. The only other known American species besides *farri* which lacks tarsal claws is the widespread Neotropical *incubans* (Macfie), but it has only one

spermatheca. The unnamed Puerto Rican species is apparently new, but it should not be named and described until more adequate material has been collected.

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